



(12)

**EUROPEAN PATENT APPLICATION**

**(88) Date of publication A3:**  
**02.06.1999 Bulletin 1999/22**

**(51) Int. Cl.<sup>6</sup>: H01L 27/15**

**(43) Date of publication A2:**  
**19.06.1996 Bulletin 1996/25**

**(21) Application number: 95119100.6**

**(22) Date of filing: 05.12.1995**

**(84) Designated Contracting States:**  
**DE FR GB**

**(30) Priority: 14.12.1994 US 355742**

**(71) Applicant: EASTMAN KODAK COMPANY**  
**Rochester, New York 14650 (US)**

**(72) Inventors:**

- **Tang, Ching Wan,**  
**c/o Eastman Kodak Company**  
**Rochester, New York 14650-2201 (US)**

- Hselh, Blay Cheng,  
c/o Eastman Kodak Company  
Rochester, New York 14650-2201 (US)

**(74) Representative:**  
**Reichert, Werner F., Dr. rer.nat., Dipl.-Phys.**  
**Kodak Aktiengesellschaft,**  
**Patent Department**  
**70323 Stuttgart (DE)**

**(54) TFT-EL display panel using organic electroluminescent media**

(57) A flat panel display comprising thin-film-transistor-electroluminescent (TFT-EL) pixels is described. An addressing scheme incorporating two TFTs and a storage capacitor is used to enable the EL pixels on the panel to operate at a duty factor close to 100%. This TFT-EL device eliminates the need to pattern the EL

cathode, thus greatly simplifying the procedure to delineate the EL pixels as well as ensuring high resolution. The TFT-EL panel consumes less power than conventional TFT-LCD panels, especially when the usage factor of the screen is less than unity.

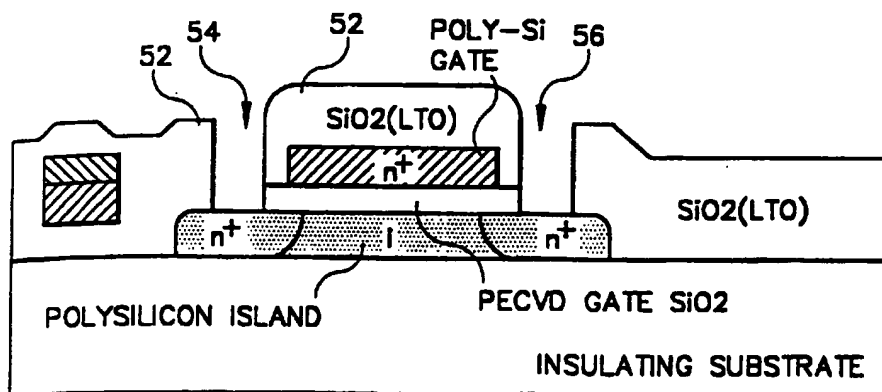


FIG. 5



European Patent  
Office

# EUROPEAN SEARCH REPORT

Application Number  
EP 95 11 9100

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	PATENT ABSTRACTS OF JAPAN vol. 095, no. 002, 31 March 1995 -& JP 06 325869 A (MITSUBISHI KASEI CORP), 25 November 1994 * abstract *	1	H01L27/15 G09G3/32
D,A	US 4 042 854 A (LUO FANG-CHEN ET AL) 16 August 1977 * abstract; figures 3,4 *	1	
A	EP 0 365 445 A (EASTMAN KODAK CO) 25 April 1990 * abstract; figures *	1	
D,A	EP 0 553 496 A (EASTMAN KODAK CO) 4 August 1993 * abstract; figures *	1	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
			H01L G09G
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 14 April 1999	Examiner De Laere, A
<p>CATEGORY OF CITED DOCUMENTS</p> <p>X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document</p> <p>T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons</p> <p>&amp; : member of the same patent family, corresponding document</p>			

**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

EP 95 11 9100

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.  
The members are as contained in the European Patent Office EDP file on  
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-04-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 4042854 A	16-08-1977	DE 2652296 A	26-05-1977
		FR 2332585 A	17-06-1977
		GB 1563243 A	19-03-1980
		JP 52064891 A	28-05-1977
		NL 7612128 A	24-05-1977
		US 4135959 A	23-01-1979
EP 0365445 A	25-04-1990	US 4996523 A	26-02-1991
		DE 68914389 D	11-05-1994
		DE 68914389 T	13-10-1994
		JP 2148687 A	07-06-1990
		JP 2729089 B	18-03-1998
EP 0553496 A	04-08-1993	US 5276380 A	04-01-1994
		CA 2085298 A	01-07-1993
		DE 69217475 D	27-03-1997
		DE 69217475 T	28-08-1997
		JP 5275172 A	22-10-1993